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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,994	01/22/2002	Jim Hunter	8229-018-27 CIP	2175
23552	7590	11/02/2005		EXAMINER
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			AMARI, ALESSANDRO V	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/050,994	HUNTER ET AL.	
	<b>Examiner</b> Alessandro V. Amari	<b>Art Unit</b> 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12/28/04 & 5/31/05.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-10 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 31 May 2005 and 17 August 2005 has been entered.

### ***Inventorship***

2. The request to correct the inventorship of this nonprovisional application under 37 CFR 1.48(a) is deficient because:

An oath or declaration by each actual inventor or inventors listing the entire inventive entity has not been submitted.

### ***37 C.F.R. 1.608 (b) Declaration***

3. The declaration filed on 22 January 2004 under 37 CFR 1.131 has been considered but is ineffective to overcome the Hawkins US Patent 6,233,087 reference.

4. The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Hawkins reference.

In order to show prior invention, the Applicants must provide facts sufficient to show reduction to practice prior to the effective date of the Hawkins reference. In order to show actual reduction to practice, the invention must have been sufficiently tested to demonstrate that it will work for its intended purpose. See MPEP § 2138.05. None of

the exhibits provided in the declaration provide any test results or other demonstrable facts to show that the device will work for its intended purpose.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-8 and 10 stand rejected under 35 U.S.C. 102(e) as being anticipated by Hawkins et al US Patent 6,233,087.

In regard to claims 1 and 4, Hawkins et al disclose (see Figures 1 and 2) a reflective light processing element, comprising a substrate (52); a dielectric layer (58) formed on the substrate; a conductive trace (60, 62, 64) formed on the dielectric layer, the conductive trace allowing charges trapped in the dielectric layer to escape wherein said trapped charges are present at least on the surface of the dielectric layer as described in column 5, lines 41-60 and column 6, lines 15-50; and a plurality of ribbons

(72a, 72b) formed above the substrate and the conductive trace wherein each of said ribbons comprise a top surface that is reflective and said reflective surfaces exhibit the same degree of reflectivity as described in column 6, lines 51-62 and as shown in Figure 2.

In regard to claim 5, Hawkins et al disclose (see Figures 1, 2 and 6) a high contrast grating light valve comprising a silicon substrate as described in column 4, lines 63-65; a protective dielectric layer (58) formed on the substrate; a first set of ribbons (72a) each with a first average width  $W_a$  and a second set of ribbons (72b) each with a second average width  $W_b$ , wherein the ribbons of the first set alternate between the ribbons of the second set and one of said first and second set of ribbons is configured to constructively and destructively interfere with an incident light source having a wavelength  $X$ ; wherein said substrate comprises a silicon wafer protected by a dielectric layer as shown in Figures 1 and 2; and a conductive trace (60, 62, 64) formed at least partly on the protective layer and in electrical contact with said substrate, allowing charges trapped in the protective layer to escape wherein each of first and second set of ribbons comprise a top surface that is reflective and said reflective surfaces exhibit the same degree of reflectivity as described in column 5, lines 41-60 and column 6, lines 15-62.

Regarding claim 2, Hawkins et al disclose that said trapped charges are present at least on the surface of the dielectric layer as described in column 5, lines 41-60 and column 6, lines 15-50.

Regarding claim 3, Hawkins et al disclose that said trapped charges are formed, with respect to the dielectric layer, during operation of said reflective light processing element as described in column 5, lines 41-67 and column 6, lines 1-50.

Regarding claim 6, Hawkins et al disclose that said dielectric layer comprises silicon dioxide as described in column 7, lines 50-60.

Regarding claim 7, Hawkins et al disclose that said conductive trace is comprised of aluminum as described in column 6, lines 8-10.

Regarding claim 8, Hawkins et al disclose that the width  $W_a \geq W_b$  as shown in Figures 1 and 2.

Regarding claim 10, Hawkins et al disclose that the reflective surfaces comprise aluminum as described in column 8, lines 30-33.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins et al U.S. Patent 6,233,087 in view of Bloom et al U.S. Patent 5,311,360.

Regarding claim 9, Hawkins et al teaches the invention as set forth above that the top surfaces of the ribbons in said first set and the top surfaces of the ribbons in said second set have reflective surfaces as described in column 8, lines 16-33 and as shown in Figures 1, 2 and 6.

However, Hawkins et al does not teach that the surface between the ribbons of the first set and second set has reflective surfaces.

Bloom et al does teach that the surface between the ribbons of the first set and second set has reflective surfaces as described in column 5, lines 53-56.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to ensure that the surface between the ribbons of the first set and second set is reflective as taught by Bloom et al for the device of Hawkins et al in order to enhance the reflectance of the surface area so as to improve the performance of the grating light valve.

#### ***Response to Arguments***

9. Applicant's arguments filed 28 December 2004 and 17 August 2005 have been fully considered but they are not persuasive.

Applicants argue that they claim the exact same invention as that claimed in Godil and since the rejection over Godil has been withdrawn, the necessary conclusion is that the Applicants have established a conception and reduction to practice. The Applicants also argue that the declarations responsive to the rejection over US 6,169,624 evidence tending to demonstrate a date of invention of the subject matter in advance of the filing date.

In response to this argument, the Examiner would first like to state that that the withdrawal of Godil has no bearing on whether the applicants have established a conception and reduction to practice and the Examiner has not concluded as such. Secondly, the Applicants should note that in regard to Godil they are not claiming the

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exact same invention since the claim was amended and furthermore, a 37 CFR 1.131 affidavit or declaration is ineffective to overcome a US Patent, not only where there is a verbatim correspondence between claims of the application and of the patent, but also where there is no patentable distinction between the respective claims. *In re Clark*, 457 F.2d 1004, 173 USPQ 359 (CCPA 1972); *In re Hidy*, 303 F.2d 954, 133 USPQ 650 (CCPA 1962); *In re Teague*, 254 F.2d 145, 117 USPQ 284 (CCPA 1958); *In re Ward*, 236 F.2d 428, 111 USPQ 101 (CCPA 1956); *In re Wagenhorst*, 62 F.2d 831, 16 USPQ 126 (CCPA 1933).

The Applicants further argue that the 37 C.F.R. 1.608 (b) declaration statements themselves are adequate proof of actual reduction to practice. The Applicants allege in the declaration that it is apparent that the device does work for its intended purpose.

In response to this argument, the applicant is reminded that there are three ways to show prior invention as set forth in MPEP 715.07, as follows:

- (A) reduction to practice of the invention prior to the effective date of the reference; or
- (B) conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to a subsequent (actual) reduction to practice; or
- (C) conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to the filing date of the application (constructive reduction to practice).

Further, MPEP 715.07 sets forth the requirements for conception of the invention which must include reasonable diligence as evidenced by actual reduction to practice, as reproduced below:

A conception of an invention, though evidenced by disclosure, drawings, and even a model, is not a complete invention under the patent laws, and confers no rights on an inventor, and has no effect on a subsequently granted patent to another, UNLESS THE INVENTOR FOLLOWS IT WITH REASONABLE DILIGENCE BY SOME OTHER ACT, such as an actual reduction to practice or filing an application for a patent. *Automatic Weighing Mach. Co. v. Pneumatic Scale Corp.*, 166 F.2d 288, 1909 C.D. 498, 139 O.G. 991 (1st Cir. 1909). Conception is the mental part of the inventive act, but it must be capable of proof, as by drawings, complete disclosure to another person, etc. In *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897), it was established that conception is more than a mere vague idea of how to solve a problem; the means themselves and their interaction must be comprehended also. In general, proof of actual reduction to practice requires a showing that the apparatus actually existed and worked for its intended purpose.

For the instant application, the issue is whether the applicants have met the requirements for actual reduction to practice. The Examiner wishes to cite the MPEP 2138.05 which states the requirements for actual reduction to practice, as follows:

For an actual reduction to practice, the invention must have been sufficiently tested to demonstrate that it will work for its intended purpose, but it need not be in a commercially satisfactory stage of development. If a device is so simple, and its purpose and efficacy so obvious, construction alone is sufficient to demonstrate workability. *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860, 226 USPQ 402, 407 (Fed. Cir. 1985).

Furthermore, testing is required to establish an actual reduction to practice as set forth in MPEP 2138.05 as follows:

"The nature of testing which is required to establish a reduction to practice depends on the particular facts of each case, especially the nature of the invention." *Gellert v. Wanberg*, 495 F.2d 779, 783, 181 USPQ 648, 652 (CCPA 1974)

In summary, the Applicants have not shown actual reduction to practice by including evidence of testing of the device in order to show prior invention. While the case law cited shows that the sufficiency of the testing depends on the particular facts of each case, the applicants in the instant application have provided no evidence that any

testing was done to show that the apparatus claimed worked for its intended purpose. Further, a declaration by the inventors to the effect that their invention was reduced to practice prior to the reference date, without a statement of facts demonstrating the correctness of this conclusion, is insufficient to satisfy 37 C.F.R. 1.131. 37 C.F.R. 1.131(b) requires that original exhibits of drawings or records, or photocopies thereof, accompany and form part of the affidavit or the declaration or their absence satisfactorily explained. Furthermore, a general assertion that the exhibits describe a reduction to practice "amounts essentially to mere pleading, unsupported by proof or a showing of facts" and thus does not satisfy the requirements of 37 CFR 1.131(b). *In re Borkowski*, 505 F.2d 713, 184 USPQ 29 (CCPA 1974)

The Applicants further argue that the Examiner is judging lack of demonstration that the invention worked for the purpose for which it is intended according to the standards of interference practice, not the standards of 37 C.F.R. 1.131 since the same rigorous proof of utility is not required for 1.131 practice.

In response to this argument, the Applicants are directed to MPEP 715.07 which states:

The facts to be established under 37 CFR 1.131 are similar to those to be proved in interference. The difference lies in the way in which the evidence is presented. If applicant disagrees with a holding that the facts are insufficient to overcome the rejection, his or her remedy is by appeal from the continued rejection.

Further, in the same section of the MPEP:

For the most part, the terms "conception," "reasonable diligence," and "reduction to practice" have the same meanings under 37 CFR 1.131 as they have in interference proceedings.

The Applicants cite *In re Eikmeyer* as evidence that that the same rigorous proof of utility is not required for 37 CFR 1.131. However, a closer reading of *In re Eikmeyer* indicates that the terms "conception" and "reduction to practice" must be established under the rule but need not be the same as what is required in the "interference" sense of those terms. This would indicate that a reduction to practice must be established under 1.131 practice. At a very minimum, the Examiner believes that given the guidance provide in the MPEP, a showing of reduction to practice must show some evidence that the apparatus functions as intended. The Applicants provided no evidence of testing or other facts (other than an a general statement in the declaration) that the device operates as intended. Therefore, the Applicants allegation in the declarations that the device functions as intended is inadequate to show actual reduction to practice and thus is ineffective to overcome the Hawkins US 6,233,087 reference.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (571) 272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

avaDy  
18 October 2005

*Approved.*  
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